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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,346	11/08/2001	John Lawrence Bowers	54135US011	8502
32692 7590 07/22/2011 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER RIVELL, JOHN A				
ART UNIT		PAPER NUMBER		
3753				
NOTIFICATION DATE		DELIVERY MODE		
07/22/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

LegalUSDocketing@mmm.com

**Office Action Summary****Application No.**

09/986,346

**Applicant(s)**

BOWERS, JOHN LAWRENCE

**Examiner**

JOHN RIVELL

**Art Unit**

3753

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/2/11 & 5/9/11.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16,17,19-25,70,72-79,83-96,100-104,108-112,114-120,122-124 and 126-129 is/are allowed.
- 6) ☒ Claim(s) 41,43,45-47 and 49-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No.(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims pending in the application are 16,17,19-25,41,43,45-47,49-54,64,66,68-70,72-79,83-96,100-104,108-112,114-120,122-124 and 126-129.

Applicant's arguments filed March 21, 2011 have been fully considered but they are not persuasive.

By amendments filed in this application, claims 1-15, 18, 26-40, 42, 44, 48, 55-63, 65, 67, 71, 80-82, 97-99, 105-107, 113, 121 and 125 have been canceled. Claims 16, 17, 19-25, 41, 43, 45-47, 49-54, 64, 66, 68-70, 72-79, 83-96, 100-104, 108-112, 114-120, 122-124, and 126-129 are pending.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 47 and 49-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 47, line 11 requires only one "stationary portion" as per the recitation "the stationary portion". Lines 14-16 requires "the (only one) stationary portion (to be) held in a stationary position in contact with a portion of the seal ridge". Thus this portion of the claim is interpreted as requiring "the stationary portion (i.e. all of it, to be) held... in contact with... the seal ridge". Lines 21-22 further require "the mounting of the flap (to cause) the (only one) stationary portion of the flap to be pressed towards the seal ridge". The problem arises in lines 22-23 which further require "at least a portion of the (only one) stationary portion (residing) in non alignment with the seal surface". Since "the (only one) stationary portion is held in a stationary position in contact with a portion of the seal ridge" (lines 14-15) how then does "a portion of the (only one) stationary

portion" now reside in non alignment with the seal ridge? Moreover, recitation of "at least a portion" is broad language that implies that any portion, including the entirety of the "(only one) stationary portion (may) reside in non alignment with the seal surface". It is clearly not understood how a single "portion" defined by the claim as being "in contact with the seal ridge" is also "not in alignment with the seal ridge" recited by the claim.

In response applicant argues:

"... the statement is not correct: The flap can have the stationary portion, or a portion of it, in non-alignment with the seat surface (as) shown in the drawings: The portion of the flap below block 16, for example, is part of the stationary portion and it is in non-alignment with the seat surface."

This argument is unpersuasive in view of the defined "stationary portion" of claim 47. The drawings do in fact illustrate a portion of the flap in non-alignment with the seat surface. However, this is not what is specified in the claim. The claim recites that "the stationary portion (is to be) held in a stationary position in contact with a portion of the seal ridge". Thus this portion of the claim is interpreted as requiring "the stationary portion (i.e. all of it, to be) held... in contact with... the seal ridge". That is, any part of the "stationary portion" that is not in contact with the seal ridge cannot be read as the, or part of the, "stationary portion". Thus if all of the "stationary portion" is held in contact with the seal ridge how can there be a "portion of the stationary portion" now not in contact with the seal ridge but rather "in non alignment with the seal surface"? Further, it is understood (relative to other claims not listed here) that, as shown in the drawings a stationary portion of the flap makes contact with the seal surface and is in non-alignment with the seal surface below block 16. However, that is not commensurate

with the requirements of claim 47 in which the recited stationary portion is "held... in contact with... the seal ridge".

***New Matter***

The following is a quotation of 35 U.S.C. §251:

Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Commissioner shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue. The Commissioner may issue several reissued patents for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued patents. The provisions of this title relating to applications for patent shall be applicable to applications for reissue of a patent, except that application for reissue may be made and sworn to by the assignee of the entire interest if the application does not seek to enlarge the scope of the claims of the original patent. No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

Claims 47, 49-54 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material which is not supported by the prior patent is as follows:

In claim 47, line 11 requires only one "stationary portion" as per the recitation "the stationary portion". Lines 14-16 requires "the (only one) stationary portion (to be) held in a stationary position in contact with a portion of the seal ridge". Thus this portion of the claim is interpreted as requiring "the stationary portion (i.e. all of it, to be) held... in contact with... the seal ridge". Lines 21-22 further require "the mounting of the flap (to cause) the (only one) stationary portion of the flap to be pressed towards the seal ridge". The problem arises in lines 22-23 which further require "at least a portion of the (only one) stationary portion (residing) in non alignment with the seal surface". Since

"the (only one) stationary portion is held in a stationary position in contact with a portion of the seal ridge" (lines 14-15) how then does "a portion of the (only one) stationary portion" now reside in non alignment with the seal ridge? The recitation of "at least a portion" is broad language that implies that any portion, including the entirety of the "(only one) stationary portion (resides) in non alignment with the seal surface" which embraces an embodiment of invention outside of the scope of the original patent and thus constitutes new matter.

In response to applicants argument, the recitation of "at least a portion" does embrace both "an embodiment of the invention which includes having any part, including all, of the 'stationary portion to (be) in non-alignment with the seal surface'" as well as an embodiment in which only one portion of the stationary portion is in non-alignment with the seal surface. The problem lies in the breadth of the open ended phrase "at least...". Since this phrase is read as being open ended it encompasses a scope of invention not embraced by the scope of the original Patent. Thus relative to the Patent, this is considered to be new matter.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 41, 43, 46, 64, 66, and 69 are rejected under 35 U.S.C. §102 (b) as being anticipated by cover (U. S. Pat. No. 2,105,183).

Regarding claim 41, the patent to Cover ('183) discloses a "filter face mask comprising: a mask body (11) adapted to fit over a nose and a mouth of a wearer (in the device of Cover ('183), although not explicitly illustrated in the figures, the mask 11 is considered to be positionable over the nose and mouth of the wearer since Pat. No. 2,105,183 is disclosed as being an improvement over a previous application, Serial No. 722,619 which matured into U.S. Pat. No. 2,112,270 of record which fully discloses that the mask 11 would be located over the nose and mouth of the wearer); and an exhalation valve (figures 3, 5 and 6) mounted to the mask body; the exhalation valve comprising only one flexible flap (read at either half of the flap 23 forming one valve) and a valve seat (surface of plate 17 cooperating with the half of flap 23 forming the "only one flexible flap"); the flexible flap (the half of flap 23) being non-centrally mounted to the valve seat (at 17) at a stationary end (that end of the half of flap 23 at the pins 20 is "stationary" and is thus a "stationary end") in cantilever fashion (the valve element 23 is mounted by attaching the portion at holes 24 of the valve to the plate 17 by pins 20. As such this mounting arrangement forms a hinge area thus effectively forming two "cantilever" type valve elements either one of which is readable on the "flap" recited herein) for movement between open and closed positions; the flexible flap (the half of 23) having a longitudinal dimension (extending from the hinge area where the "flap" is fixed to a "free" extremity) and only one free end opposite the stationary end, the rests upon the valve seat (17) when the valve is in a closed position; the flexible flap (the half of 23) also having a transverse curvature in a direction transverse to the flap's longitudinal dimension (as exemplified by the concavity exhibited in figure 2, extending



along the plane of the hinge area. See page 1, right column, lines 28-31); the transverse curvature biasing the flexible flap to effect positioning and retention of the flexible flap in the closed position in the absence of an opening pressure differential across the flap for any orientation of the valve (as disclosed at page 2, lines 8-52 of Cover ('183)) wherein the flexible flap has maximum transverse curvature at the location where the flexible flap is mounted to the valve seat (at pins 20), and wherein the transverse curvature is imparted to the flexible flap by virtue of its mounting to the valve seat" by reason that the flap is pressed to the concave seat surface, as recited.

Regarding claim 43, in Cover ('183), the transverse curvature of the flexible flap (the half of flap 23) progressively decreases toward the free end of the flexible flap" from the maximum at the hinge area given that the surface 17 is concave. At locations approaching the rim of the concavity the curvature will decrease to eventually meet with the plate rim.

Regarding claim 46, in Cover ('183), "the exhalation valve is so located on the mask such that during normal head movements of a wearer, the free end of the (lower) flexible flap (of the two) is generally directed downwardly" as recited.

Regarding claim 64, the patent to Cover ('183) discloses a "filter face mask that comprises: (a) a mask body (11) adapted to fit over a nose and a mouth of a wearer (in the device of Cover ('183), although not explicitly illustrated in the figures, the mask 11 is considered to be positionable over the nose and mouth of the wearer since Pat. No. 2,105,183 is disclosed as being an improvement over a previous application, Serial No.

722,619, which matured into U.S. Pat. No. 2,112,270 of record which fully discloses that the mask 11 would be located over the nose and mouth of the wearer); and (b) an exhalation valve (figures 3, 5, and 6) mounted to the mask body, the exhalation valve comprising only one flexible flap (either one of the valves formed at each half of the flap 23 of Cover ('183)) and a valve seat (surface of plate 17), the flexible flap (either one) being non-centrally mounted to the valve seat (at 17) at a root end (the "root end" of either flap being at that end of the "one flap" mounted by pins 20) and in cantilever fashion (the valve element 23 is mounted by attachment at holes 24 of the valve to the plate 17 by pins 20. As such this mounting arrangement forms a hinge area thus effectively forming two valve elements either one of which is read as the claimed "flap") such that it has a longitudinal dimension (extending from the hinge area to the "free" extremity), (either one of) the flexible flap also having only one free end (opposite the hinge area) that rests upon the valve seat (e.g. the mating surface of plate 17) when closed, the flexible flap exhibits a curvature in a direction transverse to the flexible flap's longitudinal dimension (as exemplified by the concavity exhibited in figure 2, extending along the plane of the hinge area. See page 2, lines 8-52 of Cover ('183)), the transverse curvature biasing the flexible flap to assist in closing the valve in the absence of an opening pressure differential across the flexible flap, under any orientation of the valve (as disclosed at page 2, lines 8-52 of Cover ('183)), wherein the flexible flap has a maximum transverse curvature at the root end location where the flexible flap is mounted to the valve seat, and wherein the transverse curvature is imparted to the

flexible flap (i.e. either one of valves) by virtue of its mounting to the valve seat (17)" as recited.

Regarding claim 66, in Cover ('183), the transverse curvature of the flexible flap decreases in the longitudinal dimension toward a free end of the flexible flap" from the maximum at the hinge area given that the surface 17 is concave. At locations approaching the rim of the concavity the curvature will decrease to eventually meet with the plate rim.

Regarding claim 69, in Cover ('183), "the exhalation valve is so located on the mask such that during normal head movements of a wearer, the free end of the (lower) flexible flap (of the two) is generally directed downward" as recited.

In response to the above applicant argues that it is impermissible for the Examiner to interpret the disclosure of Cover as including two valves. Applicant sets forth individuals items of Cover that applicants' claimed invention does not have, in terms used by Cover that make it appear implausible as a reference against the claims. Applicant further argues that claims are to be gives their broadest reasonable interpretation consistent with the specification.

Firstly, it is not impermissible to reasonably interpret teachings of a reference. In Cover, the flexible flap 23 actually forms two valves. Each "valve" controls a flow path e.g. at 18 or 23 that is independent and distinct from the other flow path e.g. at 23 or 18. Reading for example, only an upper half of the assembly, one finds a single "valve" including all of the details explained above. Secondly, the Examiner has given the

claims at issue their broadest reasonable interpretation. Applicants claim language pertaining to "only one free end" is read on that free end of for example the upper half of the flap that forms an upper valve in Cover. Further the Examiner is clearly aware of the impropriety of "reading into" a reference subject matter that is not there. However, it is proper for the Examiner to interpret Cover as essentially having two separate valves.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 45 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cover (U. S. Pat. No. 2,105,183) in view of Baldwin (U. S. Pat. No. 5,295,478).

The patent to Cover ('183) discloses all the claimed features with the exception of having "the flap mounted to the valve seat by being pressed towards the seat by a member disposed on a cover".

The patent to Baldwin discloses that it is known in the art to employ a two piece housing at base portion 10 and housing or "cover" 13, clamped together to form the valve body and simultaneously clamp a valve element 12 therebetween. The assembly further includes an element 19 "mounted on the cover" that when assembled, presses the flap 12 towards the seat because element 19 is higher than the face 16 which assists in clamping the flap 12 along with seat 11, for the purpose of mounting the valve element and assembling the valve body in a single process step.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Cover ('183) a two piece housing for the purpose of clamping the valve element of Cover ('183) in its assembled location while at the same time assembling the valve body in a single process step and to include an element "mounted on the cover" that when assembled, presses the flap 23 of Cover towards the seat as recognized by Baldwin.

In response applicant argues:

"Baldwin does not describe an exhalation valve, nor a valve that has a transversely curved flap. The Baldwin valve opens during an inhalation and closes during an exhalation. The force from the exhaled air causes the valve disk 12 to be forced against the knife edge 11. Not only does Baldwin fail to suggest the basic features of the present invention, but it also fails to teach or suggest the subject matter of claims 45 and 68. Baldwin does not show a flexible flap that is mounted to the valve seat by being pressed towards the seat by a member disposed on a valve cover. There is no member on a valve cover that presses the flap towards the valve seat. Baldwin does not use a valve cover. It uses an inlet tube 19.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Additionally, in terms of applicants argument Baldwin does describe an exhalation valve. It is that valve controlling the exhalation of the person who is administering artificial respiration who blows through tube 9. The flexible flap 12 seats on a seat edge 11. The valve of Baldwin not relied on to show a transversely curved flap. The Baldwin valve opens during an exhalation of the operator and closes during an inhalation, should the operator maintain fluid communication with tube 9. The force

from the exhaled air from the operator causes the valve disk 12 to be forced away from the valve seat in the manner applicants valve is forced from the valve seat upon exhalation of the user. Thus Baldwin suggests a majority of the basic features of the present invention, as well as the subject matter of claims 45 and 68. Baldwin does show a flexible flap that is mounted to the valve seat by being pressed towards the seat by a member disposed on a valve cover. There is a member on a valve cover that presses the flap towards the valve seat. Baldwin does use a valve cover. For example, the valve housing of Baldwin is of a two piece construction. An upper half generally at 10 becomes integrally connected to a lower half 13. The upper half generally at 10 includes a seat edge at 11 which is considered to be annular given the two opposed knife edge elements identified by numeral 11. As illustrated for example in figure 2, an upper face 16 of a post 17 and the opposed edge 11 of the seat clamp flap 12 therebetween (column 2, lines 6-11). Additionally, the "portion of the peripheral edge 15 and the outer portion 19 of the rib 18 adjacent post 17 is higher than the top surface 16 of the post 17. As illustrated in figure 2 of Baldwin, since element 19 "is higher than the top surface 16", element 19, which is considered to be mounted on the "cover" 13 of Baldwin presses the flap 12 towards the seat 11 in the act of mounting the flap in its assembled location.

Claims 16, 17, 19-25, 70, 72-79, 83-96, 100-104, 108-112, 114-120, 122-124 and 126-129.

Claims 47 and 49-54 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and 35 USC 251, set forth in this Office action.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN RIVELL whose telephone number is (571)272-4918. The examiner can normally be reached on Mon.-Fri. from 6:00am-2:30pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571) 272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/John Rivell/  
John Rivell  
Primary Examiner  
Art Unit 3753**